



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 17 1999

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

**SUBJECT:** National Remedy Review Board Recommendations for the Lower Fox River Superfund Site

**FROM:** Bruce K. Means, Chair  
National Remedy Review Board

A handwritten signature in dark ink, appearing to read "B. Means", is written over the printed name of Bruce K. Means.

**TO:** William E. Muno, Director  
Superfund Division  
EPA Region 5

**Purpose**

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the lower Fox River Superfund site. This memorandum documents the NRRB's advisory recommendations.

**Context for NRRB Review**

As you recall, the Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions. The board reviews all proposed cleanup actions that exceed its established cost-based review criteria.

The NRRB review evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate regional decision maker before the region issues the proposed response action for public comment. The region will then include these recommendations in the Administrative Record for the site. While the region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may

influence the final regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

## **NRRB Advisory Recommendations**

The NRRB reviewed the informational package for the proposed remedial action for five operable units at the lower Fox River Superfund site in Wisconsin, and discussed related issues with EPA and State officials on July 29, 1999. Key EPA participants included James Hahnenberg (EPA project manager), Dr. Milton Clark, Brenda Clark, and Roger Grimes. Wisconsin Department of Natural Resources officials included Edward Lynch (State project manager) and Robert Paulson. Based on this review and discussion, the NRRB offers the following comments.

- Given the volume and complexity of the supporting analyses for this decision, the board is not in a position to endorse a particular cleanup level. However, the proposed 250 ppb cleanup level for PCBs differs from levels the board has seen at other PCB sediment sites. While the board fully acknowledges that site-specific circumstances often result in different cleanup levels for the same contaminant, the board recommends that the region explain in the proposed plan and ROD for this site (1) the risk bases and management considerations supporting the 250 PPB cleanup level, and (2) how this level is consistent with the broader environmental cleanup objectives for Green Bay.
- As the RI/FS for OU 5 is not yet complete, the state/region presented to the board only preliminary plans to address Green Bay contamination. The board understands that, at this time, the state/region plans to rely on monitored natural processes (MNP) to address contaminated sediment in Green Bay. Given the inter-relationship between the bay and river, and the importance of coordinating cleanup activities in these areas, the board recommends that the state/region describe in detail the parameters it will use to evaluate the progress and ultimate success of the MNP alternative. The board further recommends that the state/region expand its discussion of MNP to include the advantages and disadvantages of such a strategy in the context of the NCP's nine criteria.
- The state/region relies extensively on complex models both to characterize the health and environmental threats at this site, and to evaluate the feasibility and effectiveness of the remediation options. Given this, the board recommends that the state/region explain in the proposed plan and ROD (1) how it chose the models, and (2) the key assumptions used in the models.
- The state/region indicates that, over time, various river segments will recover slowly through natural processes. While the state/region plans to rely on these natural processes to achieve remedial action objectives (e.g., 250 ppb sediment weighted average concentration (SWAC) for PCBs) for OUs 2 and 5, it proposes more aggressive alternatives for OUs 1, 3, and 4. For the latter OUs, the board recommends that the state/region also evaluate alternatives that use less stringent target sediment levels (e.g., 500 ppb, or 1 ppm) to guide dredging activity. As indicated for OUs 2 and 5, monitored natural processes may be effective in reducing residual (post-dredging) sediment concentrations to the ultimate cleanup goal of 250 ppb. While these less aggressive, lower cost alternatives may require more time to achieve RAOs, they may still achieve protective sediment concentrations in a reasonable amount of time.

- The board supports the state/region's work to model how remedial action in one segment of river will affect the alternatives analyses for segments downstream. (For example, if aggressive action is taken upstream of an OU, it may reduce the time downstream sediments will need to achieve RAOs through less aggressive means or natural processes.) The board believes such analyses will be particularly helpful in evaluating whether less aggressive cleanup options mentioned above are feasible.
- The state/region presented an extensive study of scouring in the lower Fox River in support of their proposal to dredge at depth (i.e., up to 10 feet or more). The region should describe in more detail how scouring events may affect risk downstream and in Green Bay, over time. In addition, the state/region should clarify how the proposed actions address the risk from scouring. The board notes that such a discussion in the proposed plan may help to justify the absence of "capping" alternatives for several OUs, as well as the proposal to dredge to depths greater than 10 feet in some areas.
- The board notes that for OUs 3 and 4, the state/region's preferred alternative assumes a nearby, and thus relatively low cost, dewatering and disposal site in the vicinity of Holland, WI. However, for these same OUs, the region's other dredging alternatives rely on different dewatering and disposal sites. The board recommends that the state/region use the same dewatering and disposal site assumptions in evaluating all dredging alternatives to ensure a more balanced comparison among them. The state/region's cost analysis for partial dredging and capping should include the same dredging method, disposal and treatment options.
- The proposed action for OUs 3 and 4 use a pipeline for transport of dredged waste to a nearby facility to dewater and contain dredged sediments. As proposed, this preferred option includes a contingency to truck the sediment to other locations if this nearby facility is not able to accept the waste. If the state/region uses the contingency, however, the cost of the actions would increase substantially. Because of the significant cost difference between these two sediment disposal options, the board recommends that the region separate from the proposed remedy a "trucked disposal" option and include it in the proposed plan for this site as a separate cleanup alternative. This will assure that the higher cost alternative will receive explicit consideration in the proposed plan. The board notes that the state/region will need to re-evaluate this and other alternatives using the nine NCP decision criteria if the favored pipeline option is not available.
- The state/region should explain why it did not consider an alternative that addresses OU 1 sediments disposal at the OU 3/4 disposal facility or the use of a similar dewatering and disposal facility near OU 1.
- Based on the information presented at the meeting, the board believes that the state/region has evaluated the potential short-term effects of cleanup-related releases to workers, nearby communities, and the environment. Given the stakeholder interest at this site, and the concerns often raised about the health and environmental effects of dredging and sediments handling at sediment sites in general, the board recommends that the region/state discuss its evaluation of these issues in the proposed plan and ROD.

The NRRB appreciates the region's efforts to work closely with the state, the PRP and community groups at this site. The board members also express their appreciation to the region and state for their participation in the review process. We encourage Region 5 management and staff to work with their regional NRRB representative and the Region 5/7 Accelerate

Response Center in the Office of Emergency and Remedial Response to discuss any appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig  
T. Fields  
B. Breen  
J. Woolford  
C. Hooks  
R. Hall  
OERR Regional Center Directors